REMARKS

Claims 1-12 remain pending in this application with claims 1-12 being amended by this response. Claims 1-12 have been amended for purposes of clarity and to correct typographical errors. Support for the amendments are found throughout the specification and specifically on page 6, line 25 – Page 7, line 5 and in Figures 1 and 2. No new matter is added by these amendments.

The drawings and specification have been amended to correct typographical errors and thereby conform the reference numerals in the specification with the corresponding reference numerals in the drawings. No new matter is added by these amendments.

Rejection of claims 1-10 and 12 under 35 U.S.C. 102(e)

Claims 1-10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Shiomi (U.S. Patent No. 6,791,615).

The present claimed system provides a method for the correction of video signals which, for each element of a transducer, are transmitted pixel by pixel as digital pixel values alternately via at least two channels having different transfer characteristics. From the pixel values transmitted via a first of the channels, estimated values for each of the pixels of a second of the channels are formed by means of interpolation from the values of two linear adjacent pixels. Correction values for the pixel values of the second channel are derived from differences between the estimated values and the pixel values of the second channel.

During the transmission of video signals errors can occur when successive pixels are read in two different channels. These errors result in fine strips running vertically. The present system provides a method for avoiding strips and to improve the correction of pixel data.

Shiomi describes an image pickup apparatus where a half of an element of a transducer (image pickup area) is transmitted by only one channel. An average value of the

pixel data of each half and of both halves is calculated. These values are used for the calculation of correction data.

According to the present arrangement, a method for the correction of video signals includes that, for each element of a transducer, the signals are transmitted pixel by pixel as digital pixel values alternately via at least two channels. That means that the values of each second pixel of, e.g. half a row, are transmitted via a first of the channels and the values of the other pixels of that half row are transmitted via a second of the channels. By that, the values of each pixel – except the first and the last one – treated in the first channel have values of adjacent pixels in the second channel and vice versa. The pixel values in the second channel are corrected by correction values which are derived from differences between estimated values and the pixel values of the second channel. The estimated values are formed by interpolation of two adjacent pixel data in the first channel resulting in a good accuracy of the correction, because only the relevant data are used. Therefore, every value of the second channel is corrected individually.

In contrast to the present claimed system, Shiomi describes transmitting of pixel values of an element of an image pickup element (transducer) by only one channel, the values of the left element are transmitted via channel 2 and the values of the right element are transmitted via channel 1 (Fig. 3; Col 5, lines 14 – 45). The corresponding elements of the present system are the segments 2 and 3. However, in the present claimed system, the values of segment 2 are transmitted alternately via two channels, namely channels A and B, whereas the values of segment 3 are transmitted alternately via channels C and D. Unlike the present claimed system, in Shiomi the values of one of the elements cannot be transmitted alternately, as only one channel is present for this element. Thus, Shiomi neither discloses nor suggests that "for each element of a transducer, are transmitted pixel by pixel as digital pixel values alternately via at least two channels having different transfer characteristics" as recited in claim 1 of the present system.

Additionally, according to claim 1 estimated values for each of the values of the second channel are formed by the interpolation from the values of two linear adjacent pixels of the respective pixel. These adjacent pixels are in the first channel because of the altering transmission. This is clearly shown in figures 2a and 2b. However, according to Shiomi, the transmission is only by one channel, this kind of interpolation cannot take place. As a result a pixel cannot be corrected individually; only a general correction factor can be established for all pixels of an element of the transducer. Thus, Shiomi also neither discloses nor suggests "where from the pixel values transmitted via a first of the channels, estimated values for each of the pixels of a second of the channels are formed by means of interpolation from the values of two linear adjacent pixels" as recited in claim 1 of the present system. From the above, it follows that Shiomi neither discloses nor suggests "where correction values for the pixel values of the second channel are derived from differences between the estimated values and the pixel values of the second channel" as recited in claim 1 of the present system.

In view of the above remarks and amendments to the claims, it is respectfully submitted that the present arrangement as claimed in claim 1 is neither anticipated by nor unpatentable over Shiomi. As claims 2-10 and 12 are dependent on claim 1, these claims are also neither anticipated by nor unpatentable over Shiomi for the same reasons as claim 1. It is thus respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of claim 11 under 35 U.S.C. 103 (a)

Claim 11 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Shiomi in view of Hooks (U.S. Patent No. 4,463,380).

Hooks describes an image processing system for the simulation of real time images. In the system, information corresponding to a selected geographical region or geometric system is stored and selectively retrieved and processed to reproduce images corresponding to selected portions of the geographical or geometric system. In a preferred embodiment, the information is initially recorded photographically and subsequently stored in a digital recording system. Processing, memory, and control systems are employed for producing

video signals to be provided to video display units, for producing simulated real time images corresponding to the selected portion of the geographical or geometric system.

Hooks was cited to show that only pixel values which are evaluated are to those which change at a rate which is below the Nyquist frequency. However, Hooks, similarly to Shiomi, neither discloses nor suggests that "for each element of a transducer, are transmitted pixel by pixel as digital pixel values alternately via at least two channels having different transfer characteristics" as recited in claim 1 of the present system. Additionally, Hooks, similarly to Shiomi also neither discloses nor suggests "where from the pixel values transmitted via a first of the channels, estimated values for each of the pixels of a second of the channels are formed by means of interpolation from the values of two linear adjacent pixels" as recited in claim 1 of the present system. From the above, it follows that Shiomi and Hooks, when taken alone or in combination neither disclose nor suggest "where correction values for the pixel values of the second channel are derived from differences between the estimated values and the pixel values of the second channel" as recited in claim 1 of the present system.

In view of the above remarks and amendments to the claims, it is respectfully submitted that the present arrangement as claimed in claim 1 is patentable over Shiomi and Hooks, when taken alone or in combination. As claim 11 is dependent on claim 1, this claim is also patentable over Shiomi and Hooks, when taken alone or in combination, for the same reasons as claim 1. It is thus respectfully submitted that this rejection is satisfied and should be withdrawn.
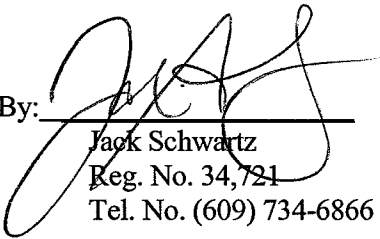
Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to

Deposit Account 07-0832.

Respectfully submitted,
Andreas Loew

By:_____
Jack Schwartz
Reg. No. 34,721
Tel. No. (609) 734-6866

Thomson Licensing, LLC.
Patent Operations
PO Box 5312
Princeton, NJ 08543-5312
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